

Rabbit Anti-CABP1 antibody

SL11986R

Product Name CABP1

Chinese Name 钙 Binding protein1 抗体

Alias CABP 1; CABP1; CABP-1; CABP1_HUMAN; Calbrain; Calcium binding protein 1; Calcium binding protein 5; Calcium-binding protein 1; Caldendrin; HCALB BR; HCALB_BR.

Research Area Cell biology Neurobiology Signal transduction Binding protein

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human,Mouse,Rat(predicted:Pig,Cow,Horse,Rabbit,Sheep)

Applications WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 40kDa

Cellular localization cytoplasmic The cell membrane

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human CABP1: 311-355/370

Lsotype IgG

Purification affinity purified by Protein A

Buffer Solution Human,Mouse,Rat(predicted:Pig,Cow,Horse,Rabbit,Sheep)1M TBS(pH7.4) with 1% BSA, Human,Mouse,Rat(predicted:Pig,Cow,Horse,Rabbit,Sheep)3% Proclin300 and 50% Glycerol.

Storage Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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Calcium plays an essential role in many biological processes. The calcium binding protein (CaBP) family shares much similarity to calmodulin. It has been shown that CaBP proteins can substitute functionally for, and probably augment the function of, calmodulin. Calcium binding proteins are a crucial part of calcium mediated cellular signal transduction in the central nervous system. There are several members of the family with varying expression patterns. CaBP1 and CaBP2 can be expressed as multiple, alternatively spliced variants in brain and retina. CaBP3, CaBP4 and CaBP 5 are restricted to retinal rod and cone cells. CaBP7 shares 70% homology with CaBP8 and 50% homology with CaM I.

Function:

Modulates calcium-dependent activity of inositol 1,4,5-triphosphate receptors (ITPRs). Inhibits agonist-induced intracellular calcium signaling. Enhances inactivation and does not support calcium-dependent facilitation of voltage-dependent P/Q-type calcium channels. Causes calcium-dependent facilitation and inhibits inactivation of L-type calcium channels by binding to the same sites as calmodulin in the C-terminal domain of CACNA1C, but resulting in an opposite effects on channel function. Suppresses the calcium-dependent inactivation of CACNA1D (By similarity). Inhibits TRPC5 channels. Prevents NMDA receptor-induced cellular degeneration.

Subunit:

Homodimer; when bound to calcium or magnesium. Interacts (via C-terminus) with ITPR1, ITPR2 and ITPR3. This binding is calcium dependent and the interaction correlates with calcium concentration. An additional calcium-independent interaction with the N-terminus of ITPR1 results in a decreased InsP(3) binding to the receptor. Interacts with CACNA1A (via C-terminal CDB motif) in the pre- and postsynaptic membranes. Interacts with CACNA1C (via C-terminal C and IQ motifs). The binding to the C motif is calcium independent whereas the binding to IQ requires the presence of calcium and is mutually exclusive with calmodulin binding. Interacts with CACNA1D (By similarity). Interacts with TRPC5 (via C-terminus). Interacts (via EF-hands 1 and 2) at microtubules with MAP1LC3B. Interacts with MYO1C and NELF

Subcellular Location:

Cytoplasm, cytoskeleton. Cytoplasm, perinuclear region. Cell membrane; Lipid-anchor; Cytoplasmic side. Golgi apparatus. Cell junction, synapse, postsynaptic cell membrane, postsynaptic density. Note=L-CaBP1 is associated most likely with the cytoskeletal structures, whereas S-CaBP1 is localized at or near the plasma membrane.

Tissue Specificity:

Retina and brain. Somatodendritic compartment of neurons. Calbrin was found exclusively in brain where it is abundant in the hippocampus, habenular area in the epithalamus and in the cerebellum.

Post-translational modifications:

**Product
Detail**

Phosphorylated. The phosphorylation regulates the activity.

Similarity:

Contains 4 EF-hand domains.

SWISS:

Q9NZU7

Gene ID:

9478

Database links:

[Entrez Gene: 9478](#) Human

[Entrez Gene: 29867](#) Mouse

[Omim: 605563](#) Human

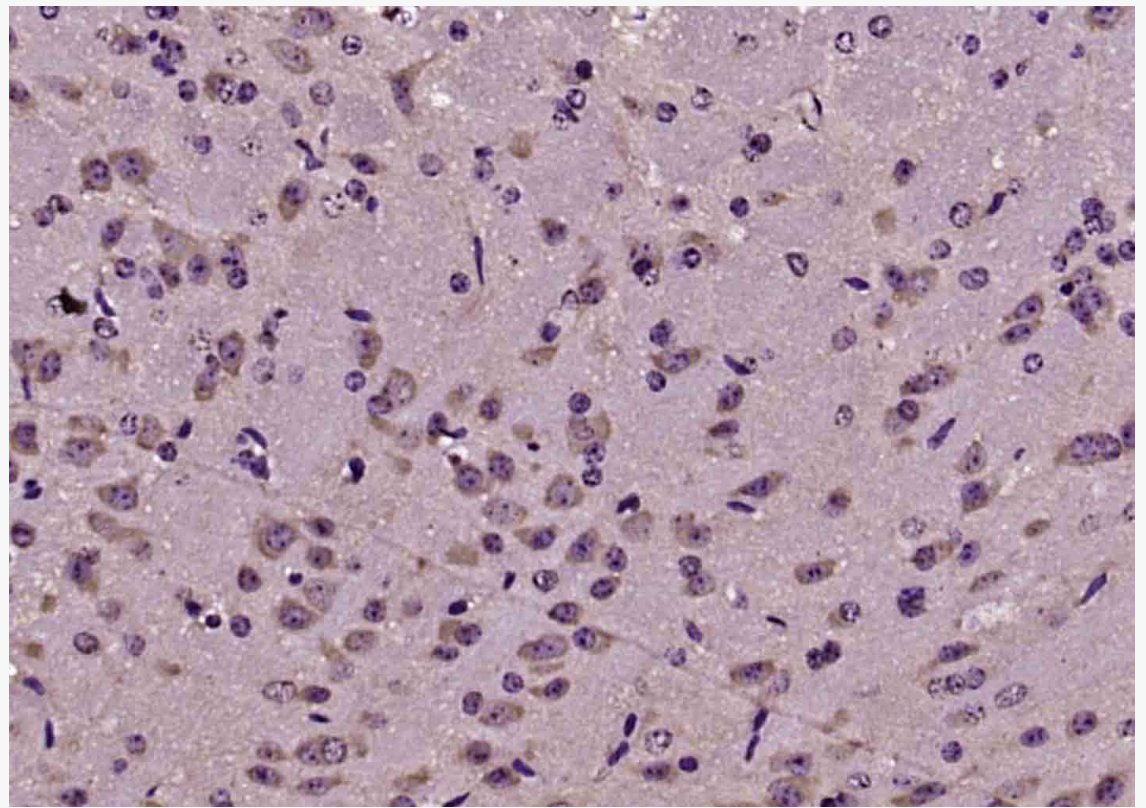
[SwissProt: Q9NZU7](#) Human

[SwissProt: Q9JLK7](#) Mouse

[Unigene: 458482](#) Human

[Unigene: 38551](#) Mouse

**Product
Picture**



Paraformaldehyde-fixed, paraffin embedded (mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CABP1) Polyclonal Antibody, Unconjugated (SL11986R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.